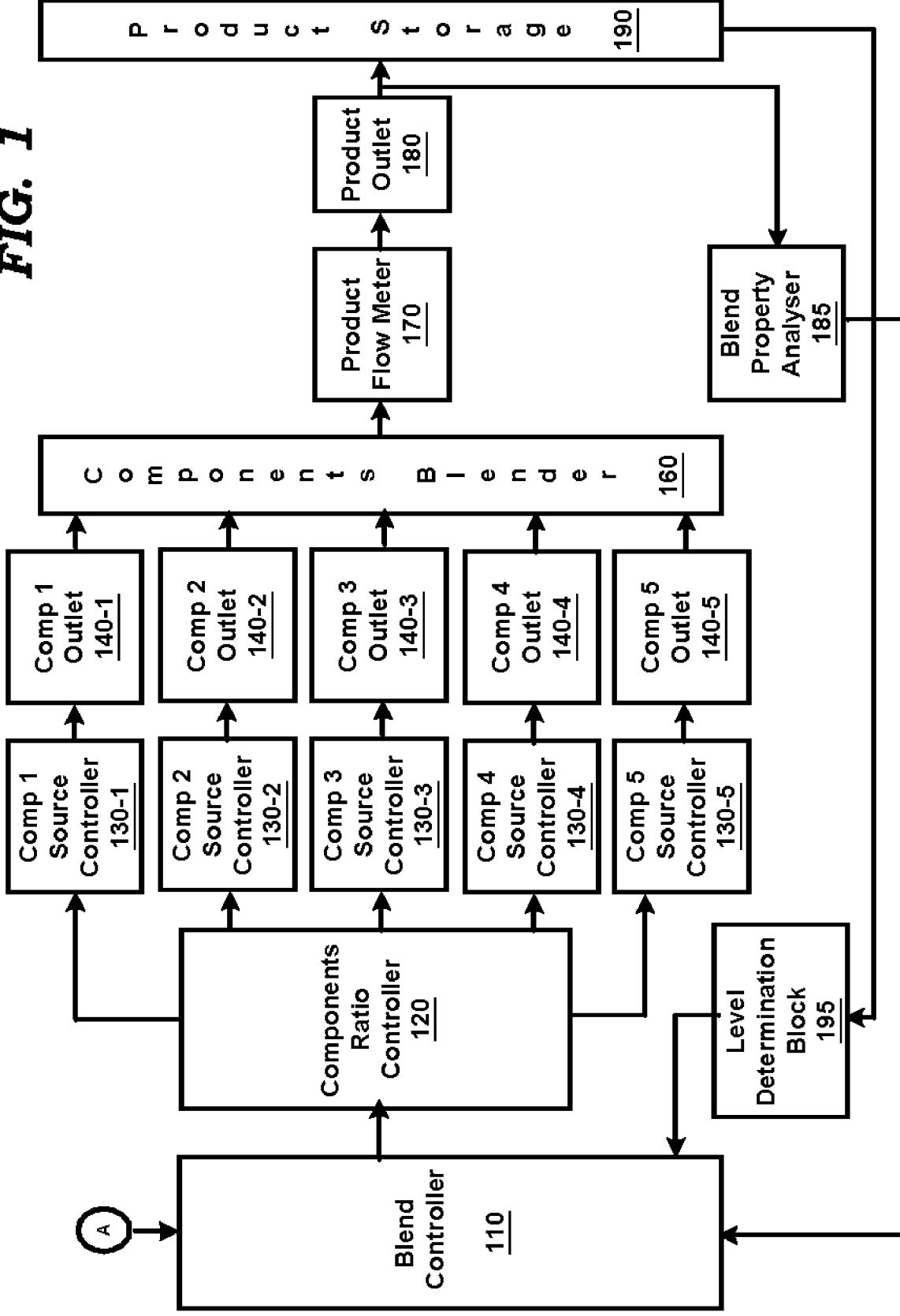


**FIG. 1**



Property	202		203	
	Low	High	Low	High
Prop 1	80	95	88	89
Prop 2	70	95	78	79
Prop 3	10	60	30	60
Prop 4	600	800	680	720
Prop 5	1	4	1	4

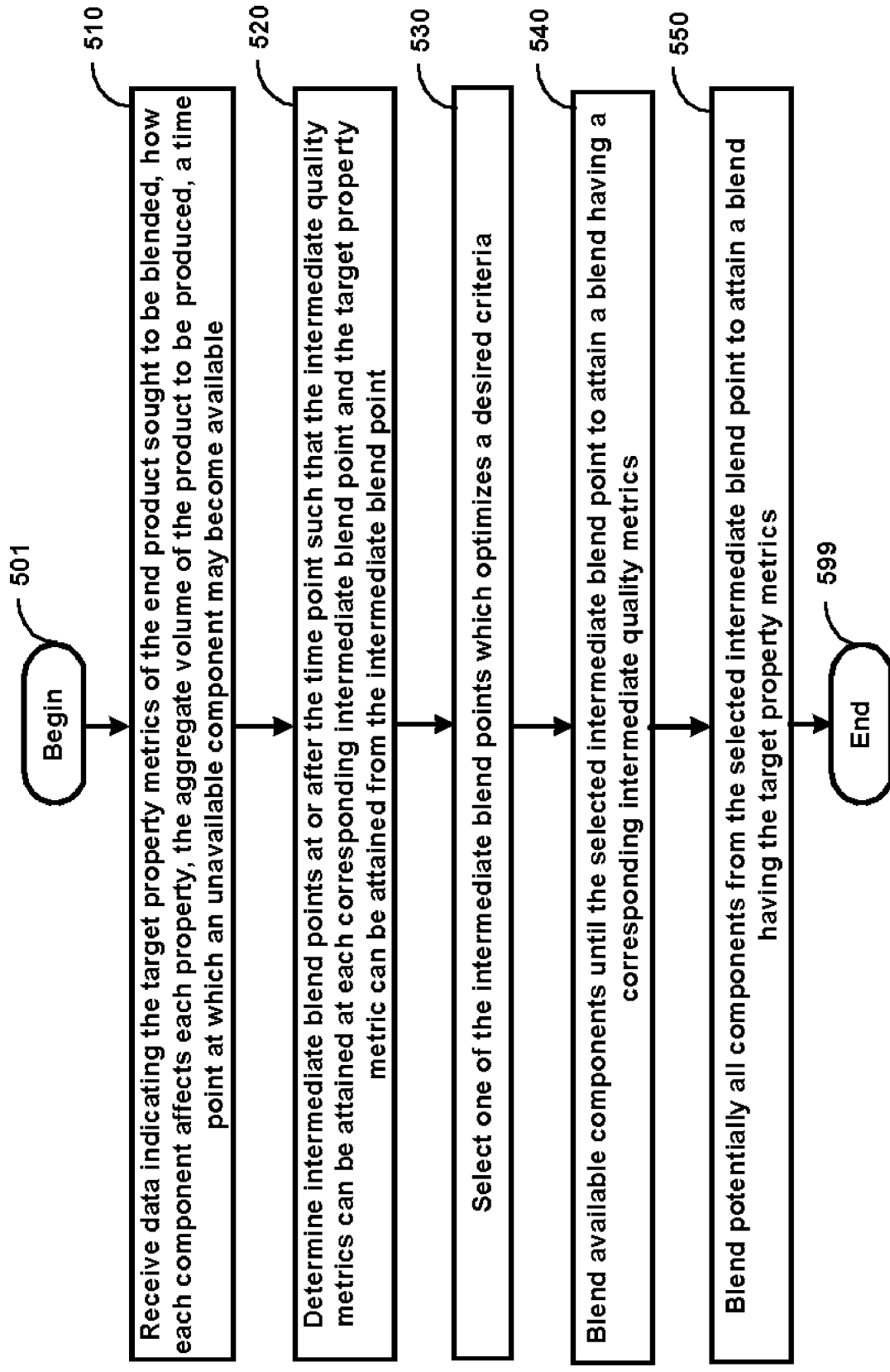
**FIG. 2**

301	302	303	304	305	306	307	308	309
Component	Prop 1	Prop 2	Prop 3	Prop 4	Prop 5	Min Ratio	Max Ratio	Cost
C1	110	100	20	680	3	0	100	135
C2	88	78	60	700	3	0	100	85
C3	91	81	50	670	4	0	100	90
C4	70	60	45	680	2	0	100	80
C5	105	95	25	720	2	0	100	100
Heel	80	70	40	700	2	NA	NA	NA

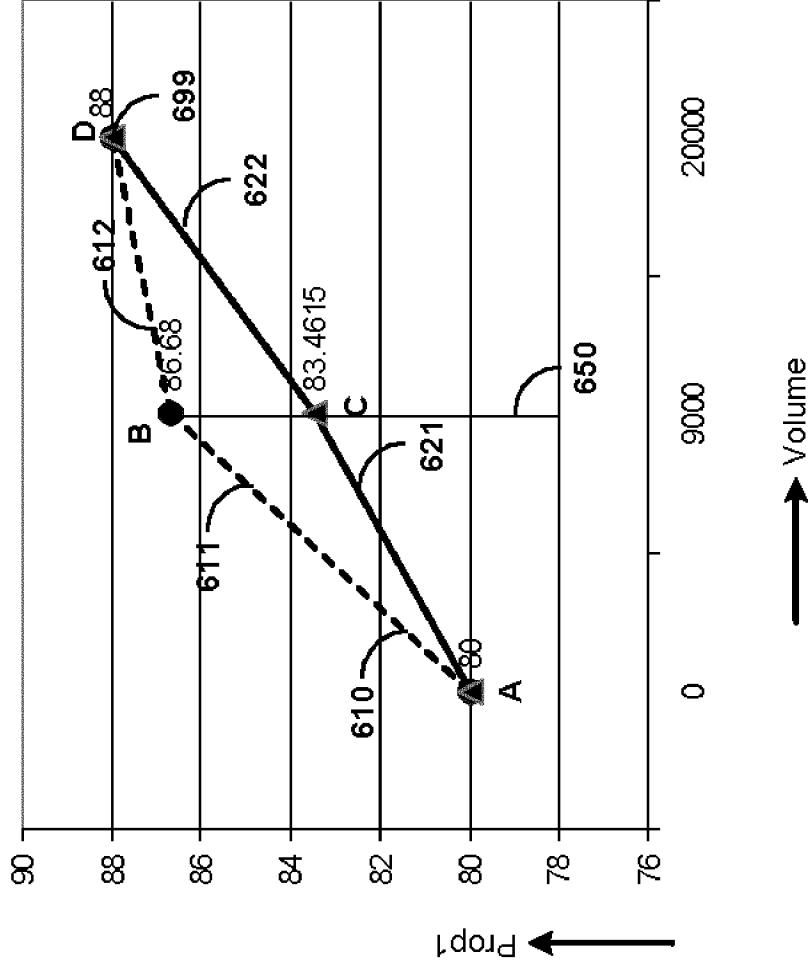
**FIG. 3**

401 Component Source	402 Min Flow	403 Max Flow	404 Min Vol	405 Max Vol
C1	0	450	0	15000
C2	0	720	0	4000
C3	0	600	0	5000
C4	0	520	0	7000
C5	0	450	0	5000

**FIG. 4**



**FIG. 5**



**FIG. 6**

Property	Intermediate Product Property Range	
	Low	High
Prop 1	83.4125	83.9625
Prop 2	73.413	73.9625
Prop 3	19.964	66.375
Prop 4	673.2	730.375
Prop 5	0.1304	3.1046

701

702

703

721

722

723

724

725

**FIG. 7**

Component	Volume consumed before The arrival of Comp5	Volumes consumed after The Arrival of comp5	Total
Comp 1	1102.50	0	1102.5
Comp 2	3150	3850	7000
Comp 3	3600	4400	8000
Comp 4	1147.5	1210	2357.5
Comp 5	0	1540	1540
Total	9000	11000	20000

**FIG. 8**



901 Component	902 Volume consumed before The arrival of Comp5	903 Volumes consumed after The Arrival of comp5	904 Total
Comp 1	0	0	921 0
Comp 2	3300	3700	922 7000
Comp 3	3600	4400	923 8000
Comp 4	2100	100	924 2200
Comp 5	0	2800	925 2800
Total	9000	11000	926 20000

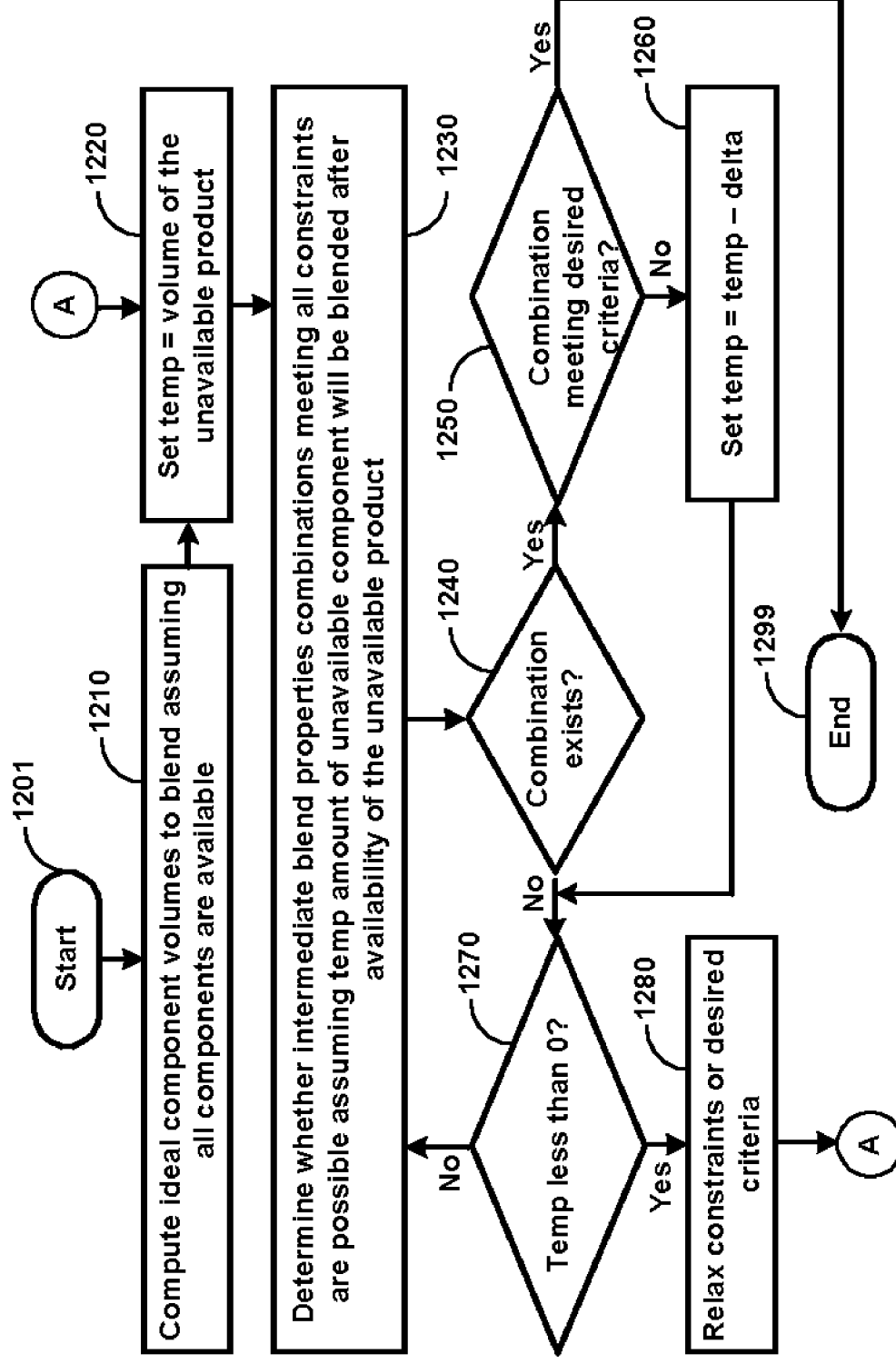
**FIG. 9**

Property	Property maintained in the Header before the component gets added	Property maintained in the Header after the component gets added
Prop 1	85.00	93.36
Prop 2	75.00	83.36
Prop 3	52.50	46.95
Prop 4	683.33	692.91
Prop 5	3.166	3.136

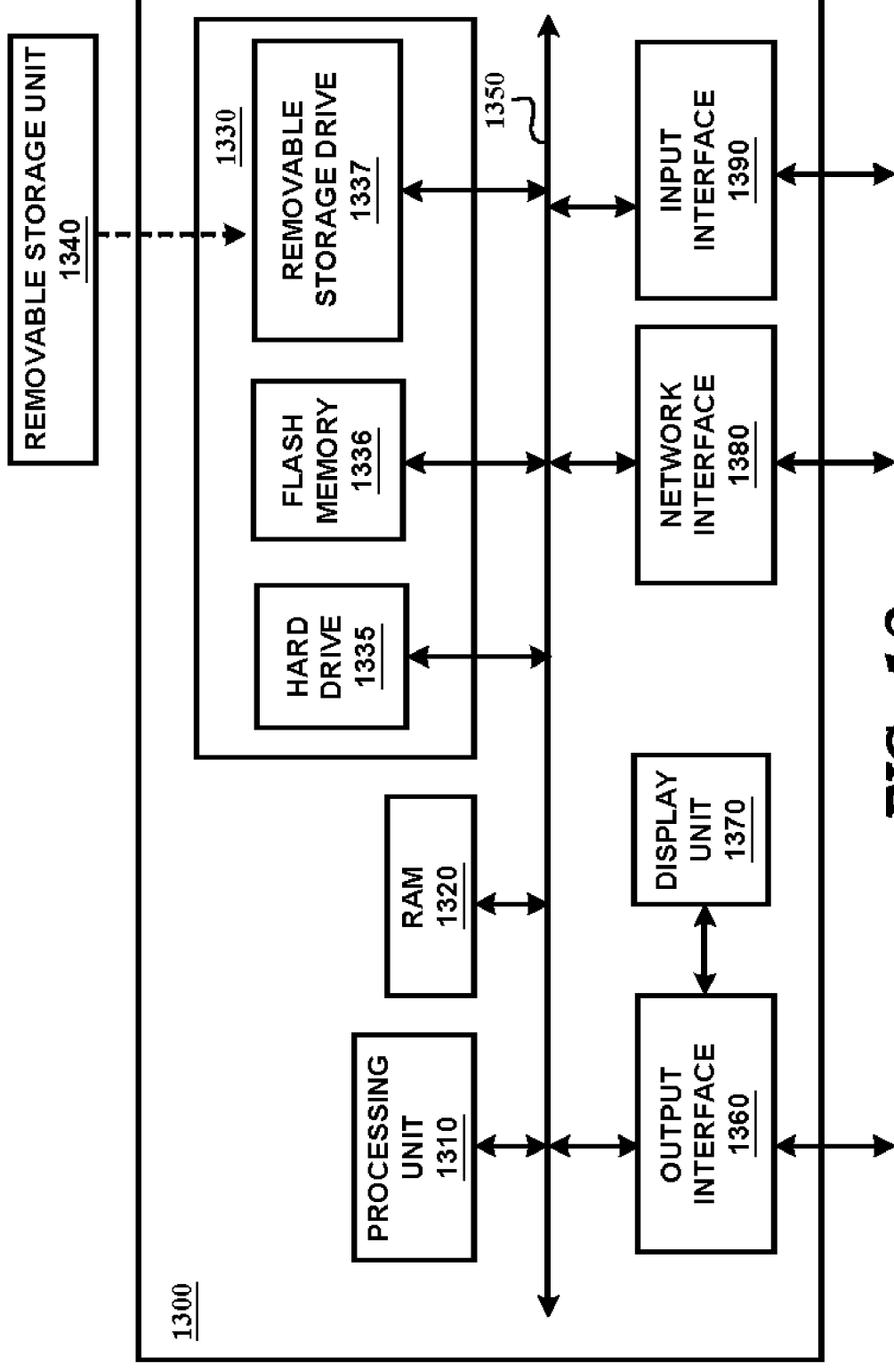
**FIG. 10**

1101	1102	1103	1104	1105	1106	1107
Component	Volume consumed (Prior Approach)	Volume consumed (present invention)	Ratios Prior Approach Volume Consumed / Total Volume	Ratios in present invention Volume Consumed/ Total Volume	Cost In Prior Approach	Cost in present invention
Comp 1	1102.50	0	0.055	0	7.4418	0
Comp 2	7000.00	7000	0.35	0.35	29.75	29.75
Comp 3	8000.00	8000	0.4	0.4	36	36
Comp 4	2357.50	2200	0.11	0.11	9.43	8.8
Comp 5	1540.00	2800	0.077	0.14	7.7	14
Total	20000	20000	1	1	90.329	88.550

**FIG. 11**



**FIG. 12**



**FIG. 13**